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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,788	08/25/2003	Hiroshi Nomura	P23689	1081
7590	09/22/2004			
GREENBLUM & BERNSTEIN, P.L.C. 1950 Roland Clarke Place Reston, VA 20191			EXAMINER SMITH, ARTHUR A	
			ART UNIT 2851	PAPER NUMBER

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

7A

<b>Office Action Summary</b>	<b>Application No.</b> 10/646,788	<b>Applicant(s)</b> NOMURA, HIROSHI	
	<b>Examiner</b> Arthur A Smith	<b>Art Unit</b> 2851	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/17/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-6, 8, 10-15, 17-24 rejected under 35 U.S.C. 102(e) as being anticipated by DiRisio (US 6711349 B1).

In reference to claims 1-3, 12 and 19, DiRisio discloses a cam mechanism for a lens barrel, the mechanism comprising: a cam ring, ref. 90, comprising a cam groove, ref. 86, which is open at one end, col. 7 lines 29-42; a support ring, ref. 68, supporting an imaging component, ref. 106, the support ring having a cam follower, ref. 80, engageable with said cam groove and movable therein towards and away from said open end, wherein the support ring is movable along an axis relative to the cam ring without rotation, col. 7 lines 28-42; and a movement limiter, ref. 58, configured to stop or limit disengagement of the cam follower from said open end of the cam groove, col. 16 lines 24-39.

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In reference to claims 4-6, 13-15 and 20-22, DiRisio discloses wherein said movement limiter comprises mutually engageable stop surfaces respectively located on the cam ring and support ring, ref. 58, ref. 290 and col. 16 lines 24-38.

In reference to claims 8, 17 and 23, DiRisio discloses wherein the other end of said cam groove is open such that said cam follower is insertable in the other end, see fig. 3.

In reference to claims 10 and 24, DiRisio discloses wherein the cam mechanism is incorporated in a zoom lens, col. 9 lines 17-25.

In reference to claims 11 and 18, DiRisio discloses wherein said cam groove has a zooming section configured to move said imaging component supported by said support ring, and an accommodating section configured to accommodate said support ring in a retracted position thereof, see fig. 8-10.

Claim 1-24 rejected under 35 U.S.C. 102(b) as being anticipated by Nomura et al. (US 2001/0019458 A1), supplied by applicant.

In reference to claims 1-3, 12 and 19, Nomura et al. discloses a cam mechanism for a lens barrel, the mechanism comprising: a cam ring, ref. 18, comprising a cam groove, ref. 18b, which is open at one end, see fig. 8; a support ring, ref. 25, supporting an imaging component, L1, the support ring having a cam follower, ref. 25b, engageable with said cam groove and movable therein towards and away from said open end, wherein the support ring is movable along an axis relative to the cam ring without rotation, paragraph 60; and a movement limiter, ref. 26a and 18c, configured to stop or limit

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disengagement of the cam follower from said open end of the cam groove, paragraph 66.

In reference to claims 4-6, 13-15 and 20-22, Nomura et al. discloses wherein said movement limiter comprises mutually engageable stop surfaces respectively located on the cam ring and support ring, paragraph 66.

In reference to claims 7 and 16, Nomura et al. discloses wherein a width of said standby section of said cam groove is greater than a width of said image control section of said cam groove, see fig. 3.

In reference to claims 8, 17 and 23, Nomura et al. discloses wherein the other end of said cam groove is open such that said cam follower is insertable in the other end, paragraph 61.

In reference to claim 9, Nomura et al. discloses wherein the cam groove is located on an outer peripheral surface of said cam ring, paragraph 46 and see fig. 1.

In reference to claims 10 and 24, Nomura et al. discloses wherein the cam mechanism is incorporated in a zoom lens, paragraph 41.

In reference to claims 11, 18, Nomura et al. discloses wherein said cam groove has a zooming section configured to move said imaging component supported by said support ring, and an accommodating section configured to accommodate said support ring in a retracted position thereof, paragraph 61 and see fig. 8.

### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arthur A Smith whose telephone number is (571) 272 2129. The examiner can normally be reached on Monday - Thursday from 8:00 AM to 5:30 PM. The examiner can also be reached on alternate Fridays during the same hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (572) 272 2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arthur A. Smith  
September 17, 2004